

REMARKS

The amendment does not involve new matter. The changes in specification and claims 1, 11, 20, 26 and 32 are supported by the original provisional application, which was incorporated by reference in the first paragraph of the present application. Evidently several lines from page 4 and several characters elsewhere in the specification and in claims 1, 11, 20, 26 and 32 were lost or modified when the application was reproduced for filing as a non-provisional case.

In the outstanding Office Action, claims 1-37 were restricted into two groups, claims 1-25, drawn to a method of encapsulating flavor and a product thereof; and claims 26-37, drawn to a chewing gum and method of making. The restriction was based on the inventions being distinct, because the flavor could be used to flavor food products other than chewing gum. During a telephone call from the Examiner, Applicants' attorney elected group I with traverse. The restriction requirement is still traversed. Restriction is improper in this case because the two sets of claims are not independent; rather they are related as combination and a subcombination. All of the elements of claim 1 are found in claim 26. Therefore the two way test of MPEP § 806.05(c) must be applied. It is submitted that even though the subcombination may have utility in other combinations, there has been no finding that the combination of claim 26 does not require the particulars that are found in claim 1 to be patentable. If the Examiner is willing to maintain the restriction requirement on the basis that claim 26 would be patentable aside from the common elements in claim 1, then the restriction may be maintained. Otherwise, the restriction must be withdrawn. This amendment shows claims 26-37 as not being withdrawn at this point because of the traversal of the restriction requirement.

Claims 1-15 were rejected in the outstanding Office Action under 35 U.S.C. § 112, second paragraph, and claim 20 was objected to. The forgoing amendments to claims 1 and 20 obviate the rejection and objection.

In the outstanding Office Action claims 1-4, 6, 12-14, 16-21 and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,666,496

(Honey) or U.S. Patent No. 5,603,971 (Porzio). This rejection is respectfully traversed. Claim 1 requires encapsulating a flavor with a matrix comprising about 30% to about 60% acacia gum; about 30% to about 60% of corn syrup solids having a DE of between about 24 and about 44; and about 2% to about 20% gelatin. Claim 16 has the same limitations, and further provides that the encapsulating matrix comprise at least 80% acacia gum and corn syrup solids on a combined basis.

While it is recognized that acacia gum, corn syrup solids and gelatin have been used individually to encapsulate materials in the past, it is submitted that the prior art does not teach the specific encapsulation using all three of these ingredients, in the amounts required by the claims. Furthermore, this encapsulation matrix has been found to provide surprising results.

Honey teaches that gum arabic, gelatin or corn syrup solids, or several other carriers, may be combined with a flavor in a aqueous vehicle, and the water removed to form a powder in which the flavor is fixed in and upon the solid carrier. However, there is no suggestion to use gum arabic, corn syrup solids and gelatin together, and certainly not in the percentages listed in claims 1 and 16. Porzio is likewise deficient in teaching this combination, even though the individual carriers are suggested as encapsulants for flavors.

The specification sets forth the unexpected results of the presently claimed invention. The inventors were well aware of the individual use of these ingredients as encapsulating materials. However, numerous trials were conducted to find encapsulating materials that would provide for improved flavor retention using a simple, inexpensive encapsulation process. See page 2, lines 19-23, and page 12, lines 17-19. The specific combination was found to provide surprisingly good encapsulation and retention of volatile flavors during storage of chewing gum into which the encapsulated flavors were incorporated. See page 17, lines 1-4.

The tables on pages 14 and 16, and the graphs in Figures 1 and 2, show that the encapsulations of the present invention had better results than any of the other encapsulations that were tried. Some of the other trials included two of the three ingredients specified in the claims, and even at the amounts called for by the claims. For instance, Examples D and E had the required amounts of gum acacia and gelatin,

and Example E even used 38% maltodextrin in addition, but neither of these examples include the corn syrup solids, and both had less retention of the flavor than Example 1 with all three ingredients. Examples L and M had the required amounts of gum acacia and corn syrup solids, but lacked the gelatin called for in the claims. Again, these materials did not cause as much of the original flavors to be retained as did Examples 2 and 3, which included the gelatin. In each instance, the inventive encapsulation ingredients and amounts gave better flavor retention than the examples without all three of the required ingredients. Nothing in the cited prior art would lead one to try making combinations of these three specific encapsulating ingredients, and certainly would not have suggested that they would give better results than other encapsulants, but only if used in the specifically claimed amounts. Hence, claims 1 and 16 involve surprising results, and are patentable over the cited references. Claims 2-4, 6, 12-14, 17-21 and 24 dependent thereon are also patentable over the cited references.

Claims 5 and 25 were rejected in the outstanding Office Action under 35 U.S.C. § 103(a) as unpatentable over Honey or Porzio further in view of U.S. Patent No. 5,603,952 (Soper). Claims 5 and 25 are dependent on claims 1 and 16, and thus include the requirement of encapsulating a flavor with a matrix comprising about 30% to about 60% acacia gum; about 30% to about 60% of corn syrup solids having a DE of between about 24 and about 44; and about 2% to about 20% gelatin. These claims further require that the gelatin comprise fish gelatin. Soper discloses the use of fish gelatin for encapsulating food, including flavor. However, Soper does not suggest that the fish gelatin be combined with gum acacia and corn syrup solids. Hence, the combination of all three references does not make obvious the invention of claims 1 and 16. Hence, claims 5 and 25 are also patentable over Honey, Porzio and Soper.

Claims 7-11 and 22 were rejected in the outstanding Office Action under 35 U.S.C. § 103(a) as unpatentable over Honey or Porzio further in view of U.S. Patent No. 2,886,446 (Kramer) or Japanese Patent No. 1-186858 (Japan '858). Claims 7-11 and 22 are dependent on claims 1 and 16, and thus also include the requirement of encapsulating a flavor with a matrix comprising about 30% to about 60% acacia gum; about 30% to about 60% of corn syrup solids having a DE of between about 24 and about 44; and about 2% to about 20% gelatin. These claims further require that the

encapsulation be formed by a spray drying process. While Kramer and Japan '858 both disclose spray drying to encapsulate flavors, neither of these references suggest the combination of gum acacia, corn syrup solids and gelatin, let alone at the levels required by claims 1 and 16. Hence, the combination of all four references does not make obvious the invention of claims 1 and 16. Hence, claims 7-11 and 22 are also patentable over Honey, Porzio, Kramer and Japan '858.

Claims 15 and 23 were rejected in the outstanding Office Action under 35 U.S.C. § 103(a) as unpatentable over Honey or Porzio further in view of U.S. Patent No. 5,158,790 (Witkewitz) or U.S. Patent No. 5,266,366 (McGrew). Claims 5 and 23 are dependent on claims 1 and 16, and thus also include the requirement of encapsulating a flavor with a matrix comprising about 30% to about 60% acacia gum; about 30% to about 60% of corn syrup solids having a DE of between about 24 and about 44; and about 2% to about 20% gelatin. These claims further require that the flavor comprises a fruit ester or one or more of the components selected from the group consisting of ethyl butyrate, isoamyl acetate, ethyl propionate, ethyl acetate, ethyl caproate, and amyl acetate. While Witkewitz and McGrew disclose the specified flavor ingredients, neither of these references suggest the combination of gum acacia, corn syrup solids and gelatin, let alone at the levels required by claims 1 and 16. Hence, the combination of all four references does not make obvious the invention of claims 1 and 16. Hence, claims 15 and 23 are also patentable over Honey, Porzio, Witkewitz and McGrew.

Since each of the reasons for the rejections have been overcome, it is believed that the case is in condition for allowance. An early notice of allowance is therefore respectfully requested.

Respectfully submitted,

/Steven P. Shurtz/

Steven P. Shurtz
Registration No. 31,424
Attorney for Applicants

Dated: April 12, 2005
BRINKS HOFER GILSON & LIONE
P.O. Box 10395
Chicago, IL 60610
(312) 321-4200
Direct Dial: (801) 444-3933